

Before the
FEDERAL COMMUNICATIONS COMMISSION
 Washington, D.C. 20554

DEC - 4 1998

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Revision of the Commission's Rules)
 To Ensure Compatibility with Enhanced)
 911 Emergency Calling Systems)

CC Docket No. 94-102
RM-8143

HIGHLAND CELLULAR, INC.)
 KNKN618 and KNKQ415)

Petition for Waiver)

To: Chief, Wireless Telecommunications Branch

PETITION FOR WAIVER

1. Highland Cellular, Inc. ("Highland"), by its attorneys, and pursuant to Section 22.119 of the Federal Communications Commission ("FCC" or "Commission") Rules and Regulations, respectfully requests a waiver of §20.18(c) of the Commission's Rules to permit Highland to operate in non-compliance of such rule after the suspension of enforcement of Section 20.18(c) ends on December 31, 1998. Section 20.18(c) requires the implementation of 911 call transmissions made from TTY devices over digital wireless systems

I.

INTRODUCTION

2. On September 30, 1998, the Wireless Telecommunications Bureau ("Bureau") extended the suspension of enforcement of Section 20.18(c) of the Commission's Rules until November 15, 1998. On October 30, 1998, the Cellular Telecommunications Industry Association ("CTIA") and the Personal Communications Industry Association ("PCIA") requested, on behalf of their members, that the Bureau

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continue suspension of enforcement of Section 20.18(c) beyond the scheduled November 15, 1998 termination date. Also in the October 30 filing, CTIA submitted the Workplan of the Wireless TTY Forum ("Forum") which identified possible solutions for TTY access over digital wireless systems.

3. On November 13, 1998, the Bureau released an Order, DA 98-2323, which extended the suspension of enforcement of Section 20.18(c) through December 31, 1998; encouraged further efforts of the Forum to work to ensure expeditious compliance with the Commission's rules; and established procedures under which wireless carriers subject to the requirements of Section 20.18(c) may petition the Commission, not later than December 4, 1998, for waivers of such requirements.

4. In the referenced Order, the Bureau stated that it was requiring carriers to provide specific information regarding their plans to comply with the requirements of Section 20.18(c). The Bureau asked that the petitions for waiver specify:

1. What steps the carrier is taking or intends to take to provide users of TTY devices the capability to operate such devices in conjunction with digital wireless phones.
2. When the carrier intends to make this capability available to TTY users. This information should include well-documented timetables and milestones from the carrier regarding the implementation of this capability.
3. What reasonable steps the carrier will take to address the consumer concerns referenced in the September 30 Order. ^{1/}

II

STEPS HIGHLAND INTENDS TO TAKE

5. In response to the referenced Order, DA 98-2323, Highland contacted its equipment provider, Nortel Networks, to provide it with information concerning the availability of equipment to provide TTY services over its digital system. See Exhibit 1.

6. In its letter, Nortel stated that its equipment using IS-136 TDMA air interface, which Highland employs, may be capable of transmitting the 911 calls with

^{1/} DA 98-1982, released September 30, 1998.

sufficient error free text to elicit proper 911 response. Nortel stated that this was dependent on the type of vocoder used in the system, the type of text message equipment used and the type of handset used. Highland is presently investigating these necessary elements and will be able to report progress to the Bureau within three months, beginning on the date of the waiver grant.

III

AVAILABILITY OF TTY USER CAPABILITY

7. In its letter to Highland, Nortel stated that an obstacle to the support of TTY operation is that industry standards -- both with the wireless and the TTY manufacturers -- are not currently defined, although the equipment manufacturers and carriers are working to develop these standards. Assistance from TTY manufacturers is necessary to this task. Nortel states that it cannot project when a design standard will be in place and estimates that it typically takes twelve to eighteen months from the adoption of standards to the commercial availability of product. Consequently, Highland cannot project the implementation of fail-safe TTY devices transmissions over its digital wireless systems until the proper equipment is available to provide it.

8. Nevertheless, as Nortel points out, consumers can test placing text calls over the digital path or set their handsets to transmit text message calls in an analog mode. Highland is investigating these alternatives and will report to the Bureau the results of its efforts within three months, beginning on the date of the waiver grant.

IV

ADDRESSING CONSUMER CONCERNS

9. In connection with the consumer concerns listed in The Bureau's Order, DA 98-1982, released September 30, 1998, Highland has taken the following steps:

- Notified current and potential users that they will not be able to use TTYs to call 911 with digital wireless devices/services;
- Has not met the October 1, 1998 deadline for reasons stated above;
- See Exhibit 1 for TDMA technology incompatibility;

- See Exhibit 1 for potential solutions for standard-setting bodies;
- According to Nortel, the TTY manufacturers must be actively involved;
- Highland cannot provide information on possible negative consequences of potential solutions;
- As stated above, the manufacturer's estimate is twelve to eighteen months from the adoption of standards to the commercial availability of product;
- In the extension time period, carriers can advise consumers to test placing text calls over the digital path or set their handsets to transmit text message calls in an analog mode;
- Highland cannot provide information on laboratory locations for testing of digital wireless phones but will make its best effort to support the participation by all representatives of all Forum member groups in the testing;
- Highland will participate in whatever field tests are necessary, following completion of laboratory tests; and
- Highland will immediately provide equipment and wireless service to TTY users so that they can conduct their own field tests and Highland will report to the Bureau the results of its efforts within three months, beginning on the date of the waiver grants.

V

THIS PETITION MUST BE GRANTED

10. Section 22.119 of the Commission's Rules, 47 C.F.R. §22.119, indicates that waivers or exceptions are appropriate upon a showing of unique circumstances and the lack of a reasonable alternative under the rules. Further, the Commission and the courts have recognized that a waiver of the Commission's Rules is appropriate where the request will not undermine the public policy basis for the rule. *WAIT Radio v. FCC*, 418 F.2d 1253 (D.C. Cir. 1969). This waiver request presents unique and special circumstances without reasonable alternatives within the scope of the rules.

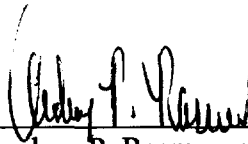
11. For the reasons discussed above, Highland has demonstrated unique and special circumstances warranting a waiver of the Commission's Rules. Further, Highland

has shown that the grant of such a waiver is consistent with Commission policy and precedent.

Respectfully submitted,

HIGHLAND CELLULAR, INC.

By:



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Dated: December 4, 1998

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NORTEL NETWORKS

December 2, 1998

Highland Cellular
550 N. Eisenhower Drive
Beckley, WV 25801
Phone # 304/855-5222

Dear Ronnie Cook,

This letter is in response to your request for Nortel Networks to provide support information for Highland Cellular. to file a waiver request with the FCC regarding the E911/TTY rules. This response is intended to give you insight into our direction on this issue. It is based on the best technical information we have available and upon what may be required by the FCC rule.

With regard to analogue calls through the Nortel Networks equipment supplied to Highland Cellular, to the best of our knowledge, our equipment is capable of transmitting 911 calls from people with speech or hearing disabilities through means other than the mobile handset, as an example through use of Text Telephone Devices (TTY). However, as noted below, most TTYs (a/k/a TTDs) in use today have not been designed to connect with wireless handsets, and the 911 text message may be corrupted by the consumers' equipment. Further, Nortel Networks believes that without extensive testing of text messages over analogue systems, it is premature to assume all 911 calls will be received by the 911 call center essentially error free.

With regard to digital calls through Nortel Networks equipment using the IS-95 CDMA air interface, the equipment, in the short term, is likely to not be capable of transmitting the 911 call with sufficient error free text to elicit proper 911 response.

With regard to digital calls-through Nortel Networks equipment using the IS-136 TDMA air interface, the equipment, in the short term, may be capable of transmitting the 911 calls with sufficient error free text to elicit proper 911 response, depending upon the type of vocoder used in the system, the type of text message equipment used, and the type of handset used.

Industry standards to support TTY operation in digital mode are not currently defined. Nortel Networks is working with other equipment manufacturers and carriers to define the required design standards needed to develop this service. History tells us that it typically takes twelve to eighteen months from the adoption of standards to the commercial availability of product. However, in this instance, if the TTY is to be a part of the phone path to send text messages

for people with hearing or speech disabilities, then TTY manufacturers must work sincerely and cooperatively with wireless manufacturers to develop a workable standard. As technical TTY considerations must be considered for a good standard, the wireless industry cannot develop a good standard without technical assistance from TTY manufacturers. Nortel Networks consequently cannot project when a design standard will be in place. In the interim, consumers may wish to test placing text calls over the digital path, or set their handsets to transmit only in analogue mode for text message calls.

If the 911 call content is corrupted by the TTY consumer devices used by speech or hearing disabled users, Nortel Networks system equipment will not be able to correct the errors. Nortel Networks is aware that the vast majority of TTYs are not designed to connect to wireless handsets, and such lack of good connection frequently corrupts messages before they reach the system networks. There are some TTY equipment models that have connections that facilitate properly connecting handsets and the TTY, but we believe few are in use. As you are aware, Nortel Networks does not currently manufacture wireless handsets, and is unable to resolve this connectivity problem. In addition, Nortel Networks is not aware of any TTY that has been designed for its tones to be carried error free over digital vocoders designed for human speech. Therefore, the digital audio path is more prone to create text errors more frequently than text messages over analogue audio paths.

Complicating the task of providing text-messaging capability for those with hearing and speech disabilities, is the lack of standards in the TTY industry. The TTY has been the most used text message system for the hearing and speech disabled users covered by the FCC's 911 rule, but there does not appear to be a single solution that would work for all TTY devices in use. In addition to the TTY, consumers are using the Internet for sending and receiving text messages. Nortel Networks is aware that people with hearing and speech disabilities, increasingly use the Internet for communication, and the Internet may become a method for placing 911 calls into the future.

The wireless industry has been working with consumer representatives and TTY manufacturers in the TTY Forum for almost two years. Nortel Networks is hopeful that information sharing from this group and comprehensive testing will identify practical solutions that manufacturers can incorporate into system solutions. However at this time Nortel Networks believes that a person with hearing or speech disabilities may find it difficult to place a wireless 911 call with the TTY equipment that they use for wireline calls, and a solution for all TTY users is not achievable by 12-31-98.

Please contact Jim Torbert at 770/661-4801 to further discuss this issue with you at your convenience.

Sincerely,



Alan Pritchard
VP Marketing